

WHAT IS CLAIMED IS:

1. A method for manufacturing a distal protection device, comprising:
braiding a plurality of filaments to form a distal protection element having a first end region having a first thickness and a second end region having a second thickness; and
reducing at least one of the first and second thicknesses in at least a portion of first and second end regions.
2. The method of claim 1, further comprising:
heat treating the filaments of the braided distal protection element.
3. The method of claim 2, wherein the heat treating step is performed prior to the reducing step.
4. The method of claim 2, wherein the heat treating step is performed after the reducing step.
5. The method of claim 1, wherein the distal protection element is a capture element.
6. The method of claim 1, wherein the distal protection element is an occluder.
7. The method of claim 1, further comprising:
attaching a marker band around at least one of the first and second end regions.

8. The method of claim 1, wherein the reducing step comprises electropolishing at least a portion of one of the filaments.

9. The method of claim 1, wherein the reducing step comprises etching at least a portion of one of the filaments.

10. The method of claim 7, wherein the etching step is selected from the group consisting of photo etching, chemical etching and laser etching.

11. The method of claim 1, wherein the reducing step comprises acid pickling at least a portion of one of the filaments.

12. The method of claim 1, wherein the reducing step comprises mechanically grinding at least a portion of one of the filaments.

13. The method of claim 1, wherein the reducing step comprises cutting and removing a portion of at least one of the filaments in at least one of first or second end region.

14. The method of claim 1, wherein the filaments comprise nitinol wires.

15. The method of claim 1, wherein the filaments comprise drawn-filled tubing wires.

16. The method of claim 13, wherein the reducing step comprises removing an outer casing of at least one of the drawn-filled tubing wires along at least a portion of the wire.

17. The method of claim 14, wherein the reducing step further comprises etching a core of at least one of the drawn-filled tubing wires.

18. The method of claim 1, wherein the filaments comprise a combination of nitinol wires and drawn-filled tubing wires.

19. The method of claim 1, wherein the filaments are made of material selected from the group consisting of metal, thermoplastic polymer, thermoset polymer, ceramics and glass.

20. The method of claim 1, wherein the reducing step gradually reduces one of the first and second thicknesses in at least one of the first and second end regions.

21. The method of claim 18, wherein the reducing step creates a stepped profile in at least one of the first and second end regions.

22. The method of claim 1, wherein the reducing step involves removing material from at least one of the first and second end regions in a spiral pattern.

23. The method of claim 1, wherein the reducing step involves removing material from at least one of the first and second end regions in a longitudinally striped pattern.

24. A method for making a braided distal protection element of a distal protection device, comprising:

braiding a plurality of heat set filaments to form a braided distal protection element having a first end region and a second end region;
heat treating the filaments;

dipping at least one of the first and second end regions into an acid pickling solution; and

attaching a marker band around at least one of the first and second end regions.

25. A method for making a braided distal protection device, comprising:

braiding a plurality of filaments to form a braided distal protection element having a first end region and a second end region;

collapsing the braided distal protection element;

bonding the filaments in the first end region;

bonding the filaments in the second end region; and

attaching a marker band around at least one of the first and second end regions.

26. A distal protection device comprising:

a distal protection element having a first end region having a first wall thickness and a second end region having a second wall thickness, wherein at least a portion of at least one of the first and second end regions has been selectively removed.

27. The distal protection device of claim 26, wherein a marker band is disposed around at least one of the first and second end regions.

28. The distal protection device of claim 26, wherein the distal protection element is comprised of filaments.

29. The distal protection device of claim 28, wherein the filaments are made of a material selected from the group consisting of metal, thermoplastic polymer, thermoset polymer, ceramics and glass.

30. The distal protection device of claim 29, wherein the filaments comprise nitinol wires.

31. The distal protection device of claim 29, wherein the filaments comprise drawn-filled tubing wires.

32. The distal protection device of claim 29, wherein the filaments comprise a combination of nitinol wires and drawn-filled tubing wires.

33. The distal protection device of claim 28, wherein a portion of at least one filament is removed in at least one end region.

34. The distal protection device of claim 26, wherein a spiral pattern is formed in at least one end region.

35. The distal protection device of claim 26, wherein longitudinal slots are formed in at least one end region.

36. The distal protection device of claim 26, wherein at least one of the first and second wall thicknesses has been reduced.

37. The distal protection device of claim 36, wherein the reduction of wall thickness is a smooth taper.

38. The distal protection device of claim 36, wherein the reduction of wall thickness is stepped.

39. The distal protection device of claim 26, wherein the distal protection device is attached to a distal end of a guidewire.

40. The distal protection device of claim 39, wherein the selective removal of material reduces the stiffness of the distal protection element so that the distal protection element collapses snugly about the guidewire.